

**CARKEEK PARK  
ENVIRONMENTAL LEARNING CENTER  
COST REVIEW**

**April 30, 2004**

# City of Seattle Office of City Auditor



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## **Mission:**

To make City government as efficient, effective, equitable, and accountable as possible.

## **Background:**

Seattle voters established our office by a 1991 amendment to the City Charter. The Office is an independent department within the Legislative branch of City government. The City Auditor reports to the Chair of the City Council's Finance and Budget Committee and has a six-year term to ensure his/her independence in selecting and reporting on audit projects.

Internal auditing, as defined by The Institute of Internal Auditing, is:

an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to the evaluation and improvement of the effectiveness of risk management, control, and governance processes.

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700 Fifth Avenue, Suite 2410, Seattle, Washington 98104-5030  
Office: (206) 233-3801 Fax: (206) 684-0900 TTY: (206) 233-0025  
email: [auditor@ci.seattle.wa.us](mailto:auditor@ci.seattle.wa.us)  
website: [cityofseattle.net/audit](http://cityofseattle.net/audit)

**CARKEEK PARK  
ENVIRONMENTAL LEARNING CENTER  
COST REVIEW**

**April 30, 2004**

City Audit Team: Megumi Sumitani, Auditor-In-Charge  
Susan Baugh, Principal City Auditor  
Mary Denzel, Assistant City Auditor

City Auditor: Susan Cohen

***Office of City Auditor***  
700 Fifth Avenue, Suite 2410  
Seattle, Washington 98104-5030



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# City of Seattle

## Office of City Auditor

Susan Cohen, City Auditor

### MEMORANDUM

DATE: April 30, 2004

TO: Councilmember David Della  
Chair, Parks, Neighborhoods, and Education Committee

FROM: Susan Cohen, City Auditor *SC*

SUBJECT: Cost Review of Carkeek Park Environmental Learning Center

Our review of the Carkeek Park Environmental Learning Center focused on project costs from the conceptual planning phase as a community-managed project to its completion by the Department of Parks and Recreation. The primary objectives of the review were to identify the factors contributing to an 86 percent increase in total project cost, and to determine the reasonableness of the final project cost. Based on our review, we determined that the final project cost of \$767,948 was significantly higher than the initial community cost estimate of \$413,956 due to:

- An incomplete initial project cost estimate;
- Greater than anticipated construction bids and costs; and
- Higher costs associated with sustainable design.

We also determined that the final project cost was reasonable compared to two other recently constructed Department of Parks and Recreation facilities of similar scope and size.

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#### **Carkeek Park Environmental Learning Center Background and Project Description**

The Carkeek Watershed Community Action Project and the Carkeek Park Advisory Council were instrumental in the development of the Carkeek Park Environmental Learning Center. Beginning in 1999, the Carkeek Watershed Community Action Project led the effort to raise funds for the construction of an environmental demonstration facility by renovating and expanding an existing 900-square foot Educational Annex Building located in Carkeek Park.<sup>1</sup> An important community goal was to qualify the facility as the City of Seattle's first Gold-level

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<sup>1</sup> The Carkeek Watershed Community Action Project raised funds totaling \$265,000 in support of the new Environmental Learning Center —\$86,000 in private donations, \$120,000 through a City Neighborhood Matching Fund Grant, and \$59,000 from the Department of Parks and Recreation's Neighborhood Response Fund.

facility under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Program.

During the initial planning and design phases, the Carkeek Park community leaders managed the project. The Department of Neighborhoods and the Department of Parks and Recreation Planning Section worked closely with the community in advisory capacities. Recognizing the numerous funding sources required to finance the facility and the complexity of the project scope, the Parks Planning Section recommended that the community transfer responsibility for completion of the project design and construction to the Department of Parks and Recreation. In 2002, the Parks Project Management Section assumed responsibility for completing the project design, bid process, and construction.

The Environmental Learning Center consists of a large multi-purpose room for educational programs, a resource center, research center, kitchen, storage room, accessible restrooms, interpretive display area, reception area, and office space. The U.S. Green Building Council certified the 1,750 square foot facility as a Gold-level LEED facility in November 2003.

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### **Project Scope, Objectives, and Methodology**

We initiated the cost review of the Carkeek Park Environmental Learning Center in response to concern regarding the significant increase in the total project cost. The \$767,948 final project cost was 86 percent higher than the Carkeek Park community's original expectation for the project cost. Our objectives were to identify factors contributing to the significant project cost increases, and to determine whether the total project costs were reasonable based on recent cost data for construction of similar City Parks capital facilities. Our review of the Environmental Learning Center's project costs included:

- Interviews with officials, project managers and staff from the Department of Parks and Recreation, the Office of Sustainability and Environment, and the Fleets and Facilities Department, as well as with the director of the Carkeek Watershed Community Action Project regarding project scope and sustainable building objectives;
- Review of the capital project financial history, focusing on project cost estimates, budgets, and expenditures;
- Analysis of design and construction factors that resulted in significant budget and cost increases; and
- Comparative cost analysis of the Environmental Learning Center and two other recently constructed Department of Parks and Recreation facilities of similar scope and size.

Our review of the Environmental Learning Center was conducted in accordance with the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing*. We initiated our review in March 2003, and completed our fieldwork and data collection activities in August 2003.



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**Finding 1: Incomplete Cost Estimates, Higher Than Anticipated Construction Bids, and LEED Program Requirements Contributed to the Substantial Increase in Project Costs**

Our review of the Carkeek Park Environmental Learning Center focused on the project's cost history from its inception as a community project in 1999 to the final project cost as a completed Department of Parks and Recreation project in 2003. Exhibit 1 below summarizes the project cost revisions that led to an overall 86 percent increase from the community's original cost estimate to project completion. (See Appendix A for more detailed project cost information.)

<b>Exhibit 1</b> <b>Summary of Total Project Cost Changes for the</b> <b>Carkeek Environmental Learning Center</b>	
<b>Chronology of Project Estimates and Costs</b>	<b>Project Estimate/Cost</b>
Community's Original Cost Estimate (October 1999)	\$413,956
Community's Adjusted Estimate (May 2002)	\$599,686
Parks Project Management Original Estimate (September 2002)	\$655,606
Parks Project Management De-Scoped Estimate (October 2002)	\$655,606
Parks Project Management Final Estimate (November 2002)	\$775,506
Actual Project Cost (September 2003)	\$767,948
Project Cost Increase (Community's Original Estimate to Final Construction Costs)	\$353,992
Percent Change from 1999 to 2003	86%
Source: Department of Parks and Recreation Project Management Section, 2003.	

Three factors contributed to the \$353,992 cost increase for developing the Carkeek Environmental Learning Center. The first contributing factor was the omission or under-estimation of numerous project elements in the Carkeek Park community's original 1999 project cost estimate of \$413,956. These elements included planning and public involvement activities, in-house design reviews, permit fees, building code requirements, art allocation, equipment and furnishings, inspections, bid process, in-house construction administration, and closeout procedures. By May 2002, when the Parks Project Management Section assumed responsibility for the project, the community's cost estimate increased to \$599,686. The Parks Project Management Section subsequently raised the cost estimate to \$655,606 after completing a more comprehensive project assessment.

The second contributing factor was the higher-than-anticipated construction bids that the Department of Parks and Recreation received in September 2002. After receiving the initial construction bids, the Department of Parks and Recreation Project Management Section attempted to generate lower bids by reducing the project scope (de-scoping). Nevertheless, the low bid of \$540,122 received during the second bid process in November 2002 was 25 percent higher than the engineer's de-scoped construction cost estimate of \$431,302. Higher than

estimated construction costs, including change orders, accounted for 79 percent of the project cost increase.

The third contributing factor was the incrementally higher expense associated with the design, construction and documentation needed for LEED certification. Although the total LEED cost could not be fully determined due to limited data, we were able to identify costs for LEED design documentation and several discrete LEED features such as the photovoltaic panels, a rain collection cistern, and some energy-saving heating and electrical devices.<sup>2</sup> The identified incremental LEED cost was \$57,306, or 7 percent of the \$767,948 total project cost.

Incremental LEED costs for other large-scale City of Seattle facilities currently range up to 4.5 percent of total project costs.<sup>3</sup> The comparatively higher 7 percent incremental LEED cost for the Carkeek Park Environmental Learning Center can be attributed to its smaller size, which did not allow for the economies of scale that can be achieved in constructing the City's larger-scale facilities.

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**Finding 2: The Environmental Learning Center Project Costs Were Reasonable Compared to the Costs for Other Parks Projects of Similar Scope and Size**

Despite the significantly higher-than-estimated total project cost, the per square foot cost for the Carkeek Park Environmental Learning Center compared favorably to the two other recently completed City parks projects of similar scope and size: the Cal Anderson Shelterhouse at Lincoln Reservoir and the Camp Long West Comfort Station. These projects were selected for comparison with the assistance of the Parks Project Management Section. Although sustainable building features were not incorporated into the Anderson Shelterhouse and the Camp Long West Comfort Station, both projects have distinct programmatic and design requirements comparable to the Environmental Learning Center. Exhibit 2 below displays the square footage and project cost data for the three City parks facilities.

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<sup>2</sup> Standard building components such as mechanical, heating, and lighting systems can be designed to meet sustainability goals and contribute to a building's LEED rating. The Department of Parks and Recreation did not track or analyze the net costs of LEED components compared to the cost of providing standard building systems for this project.

<sup>3</sup> As of May 2003, City departments reported expenditures of \$7.54 million to date in LEED design and construction elements for eight recently and soon-to-be-completed capital facility projects. LEED project cost estimates ranged up to 4.5 percent of the total project costs reported to the City's Green Building Team. All eight of the large-scale facilities—the Fisher Pavilion, Seattle Justice Center, Marion O. McCaw Hall, Seattle City Hall, North Cascades Environmental Learning Center, Southwest Precinct, Park 90/5 Buildings A, B, and C, and the Central Library—are designed to qualify for Silver LEED certification.

<b>Exhibit 2</b> <b>Comparative Parks Capital Facility Square Foot Cost</b>				
<b>Project Name</b>	<b>Completion Date</b>	<b>Total Project Cost</b>	<b>Square Footage</b>	<b>Cost Per Square Foot</b>
Carkeek Park Environmental Learning Center	2003	\$767,948	1,750	\$439
Cal Anderson Park Shelterhouse	2003	\$1,025,000	1,670	\$614
Camp Long West Comfort Station	2002	\$372,556 <sup>a</sup>	688	\$542
<b>Note:</b> The square foot cost is calculated using the total project cost rather than total construction cost, consistent with standard LEED methodology. <sup>a</sup> Adjusted to 2003 dollars from \$361,881. <b>Source:</b> Department of Parks and Recreation Project Management Section, 2003.				

As shown in Exhibit 2 above, the Carkeek Park Environmental Learning Center total square foot project cost of \$439 was less than both the Cal Anderson Shelterhouse at Lincoln Reservoir (\$614 per square foot) and the Camp Long West Comfort Station (\$542 per square foot).<sup>4</sup> Thus, we concluded that the final project cost of the Carkeek Park Environmental Learning Center was reasonable.

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### **Finding 3: Clarification of the City’s Sustainable Building Policy May Be Necessary to Assess the Economic Feasibility of LEED Projects**

One of the purposes of the City’s Sustainable Building Policy is to demonstrate the City’s “commitment to environmental, economic, and social stewardship, [and] to yield cost savings to the City taxpayers through reduced operating costs....” Despite this policy direction, City departments are not currently required to collect LEED cost data regularly, which makes it difficult to evaluate the cost effectiveness of the City’s Sustainable Building Policy. Since each City department is responsible for planning and managing its construction budgets, it is important to establish minimum Citywide project cost tracking and reporting guidelines to ensure that useful LEED data are consistently available for analysis. The cost data could then be routinely evaluated to assure decision makers that capital projects’ sustainability features yield benefits commensurate with City investments.

It should be noted that costs associated with producing a LEED building are not always easy to separate from the construction budget. Some LEED strategies such as salvaging building materials from an existing building may actually reduce the project cost. Other decisions, such as incorporating daylighting into a building by selectively locating windows, may not add to the project costs, since the construction dollars are strategically used in a way that is mutually beneficial to LEED goals and the building program. Additionally, the design time spent to integrate sustainability is difficult to separate from the total design time.

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<sup>4</sup> Local architects indicate that a custom house commonly costs \$400 or more per square foot to build, including the architect’s fees but excluding the land (*Renowned architect Jim Cutler teams with packaged-home purveyor Lindal*, Seattle Times, March 28, 2004:)

The City Council may want to consider adopting legislation that requires City departments to generate cost data and reports on LEED project elements. If so, the Office of Sustainability and Environment could take the lead in developing a standardized LEED project cost tracking system for use by all City departments. The system should facilitate the future assessment of whether the LEED Program not only contributes to the City's sustainability goals but also results in sound capital investments.

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## Summary

The Environmental Learning Center costs increased from an initial project estimate of \$413,956 to \$767,948. An incomplete initial cost estimate, greater than anticipated construction bids and costs, and incrementally higher project design and construction costs for documenting and constructing Gold LEED features contributed to the significantly higher project cost. Nevertheless, we considered the overall project cost to be reasonable based on comparative cost data for other recently constructed Parks capital facilities of similar scope and size.

It is the policy of the Office of City Auditor to provide a final draft to applicable City departments for their review and comment, and to request a formal response. Responses from the Department of Parks and Recreation, the Office of Sustainability and Environment, the Fleets and Facilities Department, and the Department of Finance are attached as Appendices B through E to this memorandum. The response from the Carkeek Watershed Community Action Project is attached as Appendix F.

We appreciate the cooperation of the Department of Parks and Recreation and other City management and staff, as well as the Carkeek Watershed Community Action Project, during our review of the Environmental Learning Center. Please contact Megumi Sumitani at 233-1096 or me at 233-1096 if you have any questions or would like additional information. Thank you.

SC:MS:am

cc: Mayor Greg Nickels, City of Seattle

Ken Bounds, Superintendent, Department of Parks and Recreation

Sarah Welch, Director of Finance and Administration, Department of Parks and Recreation

Erin Devoto, Director of Planning and Development, Department of Parks and Recreation

Steve Nicholas, Director, Office of Sustainability and Environment

Mary Pearson, Acting Director, City of Seattle Fleets and Facilities Department

Jan Oscherwitz, Assistant Director/CIP Manager, Department of Finance

Aimee Strasko, Department of Finance, Audit Liaison

Regina LaBelle, Mayor's Counsel, City of Seattle

Nancy Malmgren, Director, Carkeek Watershed Community Action Project

Yvonne Sanchez, Department Director, Department of Neighborhoods

City Councilmembers

Dewayne Pitts, State Auditor's Office

**Appendix A**  
**Carkeek Park Environmental Learning Center**  
**Cost Summary**

Cost Estimate Increases From Project Inception to Completion				Estimated LEED <sup>a</sup> Costs	
Source of Data	Total Project Cost	Construction Costs	Other Project Costs <sup>b</sup>	LEED Construction	LEED Documentation
Project Cost Estimates and Final Costs					
Community’s Original Estimate for Preliminary Design (October 15, 1999)	\$413,956	\$284,137	\$129,819	\$17,000	\$6,000
Adjusted Community Estimate when Parks Project Management Section Assumed Lead (May 29, 2002)	\$599,686	\$458,319	\$141,367	Unknown	\$16,000
Parks Project Management Initial Estimate (September 11, 2002)	\$655,606	\$453,709	\$201,897	Unknown	\$38,441
Parks Project Management De-scoped Estimate (October 9, 2002)	\$655,606 <sup>c</sup>	\$431,302	\$224,304	Unknown	\$38,441
Parks Project Management Final Project Cost Estimate (November 22, 2002)	\$775,506	\$540,122 <sup>d</sup>	\$235,384	\$19,136 <sup>e</sup>	\$38,441
Actual Project Costs (September 12, 2003)	\$767,948	\$565,548	\$202,400	\$19,136 <sup>e</sup>	\$38,170 <sup>e</sup>
				Total Identified LEED \$57,306 <sup>e</sup> (7% of Total Actual Costs)	
Increase from Community’s Original Estimate to Final Project Cost					
Increase from Community’s Original Estimate to Actual Project Cost	\$353,992 (86%)	\$281,411 (99%)	\$72,581 (56%)	\$2,136 (13%)	\$32,170 (536%)
Percentage of \$353,992 Increase	100%	79%	21%		
Increase from Parks Initial Estimate to Final Project Costs					
Increase from Parks Project Management Initial Estimate (September 11, 2002) to Actual Project Costs	\$112,342 (17%)	\$111,839 (25%)	\$503 (0%)	Unknown	(\$271)
Percentage of \$112,342 Increase	100%	100%	0%	Unknown	1%
Notes: Please see reverse side of appendix.					
Source: Department of Parks and Recreation Project Management Section, 2003.					

## Notes to Appendix A

<sup>a</sup> LEED Construction and Documentation Estimated Costs were extracted from (and included in) the Construction Costs and Other Project Costs in the shaded columns to the left of heavy vertical line.

<sup>b</sup> Estimated “Other Project Costs” include planning and public involvement costs, design contract, in-house design review, permit fees, art allocation, equipment and furnishings, inspections, the bid process, in-house construction administration, closeout procedures, Washington State sales tax, owner’s contingency funds (including executed change orders), etc.

<sup>c</sup> Parks’ total project cost estimate of \$655,606 remained unchanged after project de-scoping. The “other project costs” increased to \$224,304 from the September 11, 2002 estimate, with a \$22,407 increase in project contingency. Audit staff derived the “other project costs” estimate by subtracting Parks’ revised construction cost estimate from the total project cost estimate.

<sup>d</sup> Construction contractor’s accepted low bid for which the City awarded the contract.

<sup>e</sup> Extrapolated by the Office of City Auditor from available Parks Department data and from Summit, the City’s financial management database.

**Appendix B**  
**Response from Department of Parks and Recreation**



April 2, 2004

To: Megumi Sumitani, Office of the City Auditor

From: Sarah Welch, Director Finance and Administration

Subject: Carkeek Park Audit Report

The purpose of this memo is to provide you with the Department of Parks and Recreation's response to your final draft audit report that you forwarded to us last week.

We have reviewed the report and do not have any formal comments to provide. We appreciate the time you took with this report and your responsiveness to our questions on earlier drafts of the report.

Thank you for your attention to this item. If you have further questions you can reach me at 684-7303.

**Appendix C**  
**Response from Office of Sustainability and Environment**



**City of Seattle**

Gregory J. Nickels, Mayor


**Office of Sustainability and Environment**

Steven Nicholas, Director

**M E M O R A N D U M**

**DATE:** March 30, 2004

**TO:** Susan Cohen, City Auditor

**FROM:** Steve Nicholas, Director, OSE 

**SUBJECT:** Carkeek Park Report

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Thanks for the opportunity to comment on this draft report. I'm pleased with your final conclusion, that the project cost at the Carkeek Park ELC was reasonable.

I do have several comments on one of the "additional concerns" you raise on pp. 5-6, regarding LEED cost data:

- The report should note that a fair amount of benefit-cost analysis is done to support sustainable building policy and program implementation and decision-making. Departments frequently do analysis of specific sustainable building features to inform decision-making. And, as I mentioned during our interview, my office commissioned a life-cycle benefit-cost study of "getting to Silver LEED" on two of the largest projects: the Justice Center and McCaw Hall. That analysis, by the way, showed a benefit-cost ratio of about 2:1 for the Justice Center and about 1:1 for McCaw Hall, over a 25-year timeframe.
- Doing this kind of analysis on every sustainable building feature for every project would be very expensive, and would create additional tension between spending capital budgets on projects vs. analysis;
- Benefit-cost analysis of sustainable building features often is difficult for a number of reasons. For example, often it is difficult to distinguish between a feature that is integrated into a capital project to meet the sustainable building policy vs. some other reason. In addition, it is difficult or impossible to quantify and assess many of the less direct but still important benefits of the City's sustainable building policy and program, such as water quality and habitat improvements due to reduced flows of polluted



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Office of Sustainability & Environment

700 - 5th Avenue, Suite 2748, Seattle, WA 98104-5058

Tel: (206) 615-0817, Fax: (206) 684-3013, [www.cityofseattle.net](http://www.cityofseattle.net)

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stormwater from a "green roof," or the influence the City's practices clearly have on encouraging the local and regional building industry to "build green."

- As a matter of policy, it doesn't seem appropriate to hold the sustainable building features of a capital project to a different/higher benefit-cost analytical standard than what we require of other features (e.g., architectural or aesthetic features/preferences, such as the fireplace in the new City Hall). In both cases, City decision-makers are concluding that, in the context of the entire project and project budget, an individual feature of a building has value and benefit to taxpayers that is reasonable and commensurate with the cost.
- Finally, your recommendation that OSE develop a uniform LEED project cost management system warrants further development and consideration, but would be difficult to implement within existing resources.

Thanks again for the opportunity to comment.

**Appendix D**  
**Response from the Department of Fleets and Facilities**



**City of Seattle**

Gregory J. Nickels, Mayor

**Fleets and Facilities Department**

John Franklin, Director

Date: April 9, 2004  
To: Megumi Sumitani, Office of the City Auditor  
From: Mary Pearson, Acting Director *MP*  
Subject: Carkeek Park Audit Report Draft dated 4/8/04

The purpose of this memo is to confirm that the Fleets and Facilities Department had provided a response to the final draft audit report that you forwarded to us last week.

We have reviewed the report and do not have any comments to provide other than those previously issued by Tony Gale and Amanda Sturgeon. We appreciate the time you took with this report and your responsiveness to our questions in earlier discussions.

If you have further questions you can reach me at 684-0411.

## Appendix E


### Response from the Department of Finance

City of Seattle  
Department of Finance



Dwight Dively, Director  
Gregory J. Nickels, Mayor

#### InterOffice Memo

**Date:** April 8, 2004  
**To:** Susan Cohen, City Auditor  
**From:** Jan Oscherwitz, Assistant Director  CIP Manager, Department of Finance  
**Subject:** Carkeek Park Environmental Learning Center Audit Report

Thank you for the opportunity to comment on this draft report as well as the future opportunity to provide an Executive Response, if warranted. The Department of Finance coordinates the City's capital policies and works with departments to develop the City's annual six-year Capital Improvement Program and to monitor implementation. Independent analysis such as your audit report of the Carkeek Park Environmental Learning Center can assist us in making improvements to our product and processes and we appreciate the unique perspective your office provides. We have a few specific comments on your draft:

- On p. 1, footnote #1 referencing the "\$59,000 from the 'City Neighborhood Response Fund'" is incorrect. The fund source is the Department of Parks and Recreation's Neighborhood Response Program (CIP project K73508).
- On p. 3, footnote #3, the range of incremental costs for LEED is shown as 0% to 4.5%. We are unaware of any project that achieved LEED certification with no incremental costs. DOF would like to work with your staff to verify and potentially update the accuracy and completeness of the information that you may have gathered from City departments regarding incremental LEED costs. We also suggest that the list of incremental project costs be displayed by project.
- Regarding Finding 3: While we are supportive of the recommendation to track expenses related to LEED project elements and concur with the comments of the Office of Sustainability and Environment (OSE) that a fair amount of cost-benefit analysis is already underway, we ask that our office and the implementing departments, in partnership with OSE, lead the assessment of the costs-benefits. We do not believe that a legislative solution is necessary to direct the Executive to perform an assessment of whether the LEED Program results in sound capital investments as well as contributes to the City's sustainability goals, as we intend to do this work as part of our annual capital program evaluation process.



Dwight Dively, Director  
Gregory J. Nickels, Mayor

#### InterOffice Memo

**Date:** April 27, 2004  
**To:** Susan Cohen, City Auditor  
**From:** Jan Oscherwitz, Assistant Director/CIP Manager, Department of Finance  
**Subject:** Carkeek Park Environmental Learning Center Audit Report- Follow- up Response

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This memo is a follow-up to our first memo and specifically addresses your request about how we envision our office, in partnership with OSE and the implementing departments, would lead the assessment of costs-benefits of the City's LEED program.

Department of Finance (DOF) typically leads or coordinates significant financial analysis for citywide issues. DOF performs this role to ensure consistency and rigor in approach as well as provide overall coordination of Executive efforts.

In this particular case, OSE has already done significant analytical work in evaluating LEED and has also explored options to expand the use of the LEED evaluation tool. Using independent analysis and through peer review by the departments actually implementing projects, DOF has evaluated OSE's work before it has been presented to the Mayor and Council. We intend to continue to play this role in the future.

DOF also has a lead role in reviewing capital projects on a case-by-case basis to determine the relative cost of achieving LEED Silver versus other City priorities (available resources, programming/scope requirements, and schedule demands). This analysis occurs during our normal capital project funding review process. The Mayor and City Council ultimately make the decision to fund LEED elements within capital projects.

#### LEED Costs for Park 90/5 and North Cascades Environmental Learning Center

We've attached some specific information about LEED costs for Park 90/5. Calculating the costs for LEED is a bit complicated and depends in part on what is measured. As noted in the attached summary, we estimate that total costs for Park 90/5 are about 1.9% and net costs are less than 1%. The LEED elements in the Park 90/5 project were cost-effective because LEED was incorporated early and because of the nature of the project. An important lesson to draw from our experience with Park 90/5 is that estimating prospective costs of LEED certification should take into consideration both the specifics of the project and experience with similar projects; new construction or a different project scope may not be able to achieve the same results. We do not currently have a quantifiable estimate for LEED at the North Cascade Environmental Learning Center, but we know it will be greater than zero. We would be happy to share this information with you when it is known.

### **Areas of Future Work**

We've identified several areas for future review including applying LEED principles to projects for which no LEED scoring system currently exists (infrastructure, utility work, open space) as well as the feasibility of moving the threshold to a different level than 5,000 feet. We may also want to explore tailoring the LEED rating target by facility type as a policy rather than grouping all facility types together (for instance, environmental learning centers/demonstration projects should go for LEED gold and industrial warehouse spaces should go for LEED certified). We anticipate working with both OSE and departments to accomplish this analysis.

## ATTACHMENT 1 LEED COSTS FOR PARK 90/5

Note: The costs associated with LEED elements noted totaled \$479,750 or 1.9% of total project costs of \$25M (total project costs include earthquake repairs). All costs associated with LEED are shown, even though they may achieve other policy goals (e.g., bicycle racks, highly efficient HVAC). Conversely, project savings associated with a more rigorous approach to certain project aspects are shown though they may have been partially achieved without regard to the goal of achieving LEED certification (e.g., waste management and salvaging of materials). The costs for the LEED elements were substantially offset by incentives and rebates.

Application of LEED philosophy did result in some very real savings in other areas, savings which very well might not have been identified absent a LEED approach. Attributing even a portion of those cost savings (\$400,000) into the calculation results in a LEED cost increment, before incentives and rebates, of less than 1%.

Prerequisites and Pursued Points	Estimated First costs	Estimated First Savings	Expected Incentives	Net Cost	Points Achieved
<b>Sustainable Sites</b>					
<b>Prerequisite #1</b> Erosion and Sedimentation Control	\$0			\$0	
<b>Pt. 1.0</b> Site Selection	\$0			\$0	1
<b>Pt. 4.1</b> Within specified distance of transit/buses	\$0			\$0	1
<b>Pt. 4.2</b> Bicycle Racks and Showers	\$1,000			\$1,000	1
<b>Pt. 4.4</b> No new Site Parking and Designated Carpool spaces	\$500			\$500	1
<b>Pt. 7.1</b> Non-roof Shading	\$2,000			\$2,000	1
<b>Pt. 7.2</b> Energy Star (reflective) Roofing	\$0			\$0	1
<b>Pt. 8.0</b> Light Pollution Reduction	\$0			\$0	1
<b>Water Efficiency</b>					
<b>Pt 1.1 &amp; 1.2</b> Water efficient Landscaping (See Pt. 2.0 for costs)					2
<b>Pt. 2.0</b> Innovative Waste Water Technologies (Incentive from SPU)	\$300,000		\$120,000	\$180,000	1
<b>Pt. 3.1 &amp; 3.2</b> Water Use Reduction (See Pt. 2.0 for costs)					2
<b>Energy and Atmosphere</b>					
<b>Prerequisite #1</b> Fundamental Building Commissioning	\$0			\$0	
<b>Prerequisite #2</b> Minimum Energy Performance	\$0			\$0	

<b>Prerequisites and Pursued Points</b>	<b>Estimated First costs</b>	<b>Estimated First Savings</b>	<b>Expected Incentives</b>	<b>Net Cost</b>	<b>Points Achieved</b>
<b>Prerequisite #3</b> Elimination of CFCs in HVAC Equipment	\$0			\$0	
<b>Pts 1.1 &amp; 1.2</b> Reduce Energy Use		(\$60,000)	\$170,000	(\$230,000)	3
<b>Pt. 3.0</b> Enhanced Commissioning	\$70,000		\$10,000	\$60,000	1
<b>Pt. 4.0</b> Elimination of HCFCs/Halons	\$20,000			\$20,000	1
<b>Pt. 5.0</b> Measurement and Verification	\$5,000			\$5,000	1
<b>Materials and Resources</b>					
<b>Prerequisite #1</b> Storage and Collection of Recyclables	\$0			\$0	
<b>Pts. 1.1 &amp; 1.2</b> Reuse of Building Core and Shell	\$0			\$0	2
<b>Pts. 2.1 &amp; 2.2</b> Construction Waste Management		(\$50,000)		(\$50,000)	2
<b>Pt. 3.1</b> Use of salvaged/Refurbished Materials		(\$250,000)		(\$250,000)	1
<b>Pt. 4.1</b> Recycled Content	\$5,000			\$5,000	1
<b>Pts. 5.1 &amp; 5.2</b> Locally Manufactured Materials	\$0			\$0	2
<b>Pt. 7.0</b> Certified Wood	\$15,000			\$15,000	
<b>Indoor Environmental Quality</b>	\$0			\$0	
<b>Prerequisite #1</b> Minimum Indoor Air Quality					
<b>Prerequisite #2</b> Banned Tobacco Smoke	\$0			\$0	
<b>Pts. 3.1 &amp; 3.2</b> Construction IAQ Management	\$2,000			\$2,000	2
<b>Pts. 4.1, 4.2, 4.3, &amp; 4.4</b> Low VOC emitting Materials	\$5,000			\$5,000	4
<b>Pt. 5.0</b> Entry walk-off mats and copy/chemical use venting	\$0			\$0	1
<b>Pts. 7.1 &amp; 7.2</b> Thermal Comfort	\$2,000			\$2,000	2
<b>Innovation Credits</b>					
<b>Additional Water Savings</b> (as described and costed above)					2
<b>Additional waste salvage to 95%+</b> (as described and costed above)					1
<b>Getting the Market to provide Sustainable Products</b>	\$0			\$0	1
<b>LEED Certified Professional</b>	\$250			\$250	1

<b>Prerequisites and Pursued Points</b>	<b>Estimated First costs</b>	<b>Estimated First Savings</b>	<b>Expected Incentives</b>	<b>Net Cost</b>	<b>Points Achieved</b>
Additional Costs Required by LEED effort					
Additional Service Fees for A&E	\$50,000			\$50,000	
LEED Project Registration (with USGBC)	\$2,000			\$2,000	
<b>Total Costs and Points</b>	<b>\$479,750</b>	<b>(\$360,000)</b>	<b>\$300,000</b>	<b>(\$180,250)</b>	<b>40</b>



**Appendix F**  
**Response from the Carkeek Watershed Community Action Project**

APR-16-2004 10:51 FROM: NANCY CWCAP

206 365 2945

TO: 6840900

P.1



**Carkeek Watershed Community Action Project**

**386 NW 112TH • Seattle • Wa • 98177 • 363-4116**

TO: Megumi Sumitani, Assistant City Auditor  
FAX: (206) 684-0900  
FROM: Nancy Malmgren, Director CWCAP  
FAX: (206) 365-2945

SUBJECT: CWCAP RESPONSE TO DRAFT COST REVIEW OF CPELC

Thank you for the opportunity to respond to this 'draft'. CWCAP was directly instrumental in the concept and building of the CPELC. As I indicated last Monday, April 12, 2004 from the predesign stage to the final design and execution of the construction of the building Seattle Parks & Recreation staff were involved in the building cost estimates. I and members of CWCAP Executive Board, which reviewed your 'draft' are satisfied with the changes that were made in the first paragraph of the document last Monday.

In the first paragraph under CPELC Background and Project Description CWCAP was also instrumental in negotiating for the KC Mitigation monies (\$120,000) and the SPU monies (\$80,000 plus the water reuse monies). Your choice to include this fact. The phrase 'Carkeek Park community' is extremely general and does not identify those to either blame or praise. Community feelings about the building are 'hot' and 'cold' some like it some do not! Some look with 'disdain' on the building and the way I personally chaired the Building Steering Committee! This does not bother me, but if those folks who are still looking with 'disdain' on the project and consider themselves to be part of the 'Carkeek Park community' see this document it could have a 'back lash' that I personally do not need! The CPELC was a partnership between the Carkeek Park Advisory Council and CWCAP (With CWCAP taking the lead in the project). That is a fact! Request: Please identify those organizations.

The above information leads into this request. In Project Scope, Objectives, and Methodology you refer to "officials, project managers and staff from Department of Parks and Recreation,

April 16, 2004

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the Office of Sustainability and Environment, and the Fleets and Facilities Department, as well as a Carkeek Park community leader". I cannot be interviewed as a "Carkeek Park community leader". I was interviewed as Director of the Carkeek Watershed Community Action Project and Chair of the CPELC Building Steering Committee. Request: Please change reference to read CWCAP Director or officail. That way community 'back lash' can perhaps hopefully be avoided! Though there are always some that will complain no matter what you do!

In closing, three members of CWCAP Board, including our President Walt North, reviewed the document. They and I found it well written and well documented. Again, thank you for the opportunity to respond and for your patience in the response.

Sincerely,



cc: CWCAP Board, Janet Macri, CPELC Acting Program Manager

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## Office of City Auditor's Report Evaluation Form

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Your feedback helps us do a better job. If you could please take a few minutes to fill out the following information for us, it will help us assess and improve our work.

\* \* \* \* \*

Report:

Release Date:

Please rate the following elements of this report by checking the appropriate box:

	Too Little	Just Right	Too Much
Background Information			
Details			
Length of Report			
Clarity of Writing			
Potential Impact			

Suggestions for our report format: \_\_\_\_\_

\_\_\_\_\_

Suggestions for future studies: \_\_\_\_\_

\_\_\_\_\_

Other comments, thoughts, ideas: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name (Optional):

\_\_\_\_\_

Thanks for taking the time to help us.

Fax: 206/684-0900

E-Mail: [auditor@seattle.gov](mailto:auditor@seattle.gov)

Mail: Office of City Auditor, PO Box 94729-4729, Seattle, WA 98124-4729

Call: Susan Cohen, City Auditor, 206-233-3801

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